

-PUBLIC NOTICE-
Montana Department of Environmental Quality
Announces

Richards Development Co. – Pit #2 Site

PUBLIC HEARING and DRAFT ENVIRONMENTAL ASSESSMENT

The Department of Environmental Quality has received an application from Richards Development Company for an Opencut Permit to mine sand and gravel from the proposed Richards Pit #2 to be located 1/4 mile north of Blanchard Creek Road, which is just southwest of the intersection of U.S. Highway 200 and MT Highway 83. The site is a 22.2-acre site in the SE4 NE4 of Section 5, Township 14 North and Range 14 West of Missoula County at an approximate elevation of 3,860 feet, msl.

The operation would include a crusher and wash plant with settling ponds and a concrete plant. Eventually, an asphalt plant would be installed and additional settling ponds would be added as needed. The site would be mined to a depth of 40 feet and approximately 1.5 million cubic yards of material would be excavated and removed from the site. The site is currently improved pasture consisting of smooth brome and wheatgrasses. At final reclamation in January 2033, the site would be reclaimed as an industrial and commercial site for use with facilities such as permanent processing plants, mini-storage, equipment storage and sales, and repair and service facilities, etc.

DEQ has received a substantial number of comments, inquiries, and signed petitions from persons interested in the proposed project, and had received a request for a formal hearing prior to preparation of the Draft Environmental Assessment (EA). The Department has now prepared a DRAFT EA for the proposed operation and it is now available for public review and comment.

A public hearing will be held on February 7, 2008, starting at 7:00 PM, at the Seeley Lake Community Hall, 3248 Hwy. 83 North, north of the Cottonwood Lakes Rd, north of Seeley Lake.

Copies of the application, Plan of Operations, maps and other relevant documents are available from the DEQ at the addresses below. The draft EA will also be available on the DEQ website at <http://deq.mt.gov/ea/opencut.asp>. In addition to all written and verbal comments submitted at this hearing on February 7th, DEQ will accept written comments on this proposal until 5:00 P.M. on Friday, February 22, 2008. You may email your comments to rsamdahl@mt.gov, or send them by fax or letter to one of the fax numbers or addresses listed below.

Department of Environmental Quality
Industrial and Energy Minerals Bureau
109 Cooperative Way, Suite 105
Kalispell, MT 59901
(406) 755-8985 or fax 755-8977

Department of Environmental Quality
Industrial and Energy Minerals Bureau
1520 E. 6th Ave.
Helena, MT 59601
(406) 444-4970 or fax 444-1923

Visit our general website at <http://deq.mt.gov>

DRAFT ENVIRONMENTAL ASSESSMENT

The Department of Environmental Quality (DEQ) prepared this **draft** environmental assessment (EA) in accordance with requirements of the **Montana Environmental Policy Act (MEPA)**. An EA functions to identify, disclose, and analyze impacts of an action over which the state must make a decision, in this case permitting a gravel pit. MEPA sets no environmental standards and provides no authority for the DEQ to impose conditions or mitigations beyond those allowed under applicable state laws, such as the Opencut Mining Act, the Clean Air Act, or the Water Quality Act. As a result, this document may disclose impacts that have no legislatively required standards (such as noise), or over which DEQ has no regulatory authority (such as traffic). In such instances, a company may voluntarily agree to modify its proposed activities or accept permit conditions. A permit decision is based on whether or not the proposal meets the requirements of the Opencut Mining Act and other applicable environmental laws, not the popularity of the project.

The DEQ developed this **draft** EA using the best available information. Individuals, agencies, and organizations with knowledge of specific locations or conditions may possess information that was not available to DEQ during preparation of this **draft** EA. As a result and in accordance with MEPA, DEQ will evaluate comments on this draft EA submitted by the public and if warranted, compile and further evaluate additional information or data and make revisions that will be incorporated into a final EA. Responses to the public comments and potential permit conditions or mitigation measures developed as a result of public input will also be included in the final EA.

The state law that regulates gravel-mining operations in Montana is the **Opencut Mining Act**. This law and its associated rules place operational guidance and limitations on a project during its life, and provide for the reclamation of land subjected to opencut mining. This law requires the operator to post a bond or other financial instrument so that DEQ has the financial capability to reclaim a mined site to its approved, post-mining land use if the operator is unable or unwilling to do so. Beyond the opencut mining permit, the operator must obtain all other regulatory permits and approvals that are required to conduct operations at the site. Depending on the location and the nature of the operations, additional approvals may include a road access permit, county conditional use permit, water right, air quality permit, floodplain permit, surface water or stormwater discharge permit, or other local, county, state, or federal permits and approvals.

Project Name: Richards Pit #2

Proponent: Richards Development Co.

Type and Purpose of Action: Richards Development Co. (Richards) has applied for an Opencut Permit to mine sand and gravel from the proposed Richards Pit #2 to be located ¼ mile north off of Blanchard Creek Road, which is just southwest of the intersection of U.S. Highway 200 and MT Highway 83 (see Figure 1). The operation would include a crusher and wash plant with settling ponds and a concrete plant. Eventually, an asphalt plant would be installed and additional settling ponds would be added as needed. The site would be mined to a depth of 40 feet and approximately 1.5 million cubic yards of material would be excavated and removed from the site.

The site is currently improved pasture consisting of smooth brome and wheatgrasses. At final reclamation in January 2033, the site would be reclaimed as an industrial and commercial site for use with facilities such as permanent processing plants, mini-storage, equipment storage and sales, and repair and service facilities, etc. See Figure 2.

Location: SE ¼ NE ¼ of Section 5, Township 14 North and Range 14 West

County: Missoula

Scoping Comments and Concerns:

[Cumulative Impact](#)
[Depth to Water Table](#)
[Dust and Air Quality](#)
[Endangered Fisheries](#)
[Gravel Pit Depth](#)
[Traffic Safety and Highway Impacts](#)
[Water Rights and Use](#)
[Wildlife Habitat](#)

1. **COMMENT:** Cumulative impact – The applicant plans to develop a subdivision on the adjacent property. Although the first proposal was denied by Missoula County, primarily for its unacceptable negative impact on wildlife and water quality, Richards will be resubmitting another subdivision proposal in the near future. The cumulative impact of this pit and any new subdivision obviously could be even more excessive to the local and regional environment. The cumulative impact requires detailed analysis via an EIS.

RESPONSE: MEPA requires that related future actions must be considered when these actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impact statement evaluation, or permit processing procedures. This has also come to pertain to future actions by other government agencies as well. However, there is currently no subdivision application on file with the county. As a result, cumulative impact analysis pertaining to subdivision of the site is not appropriate at this time. If development of the site is proposed in the future, environmental impacts of such action would be evaluated in accordance with requirements of the subdivision approval process.

2. **COMMENT:** Depth to water table – The application estimates the water table to be 50 feet deep based on nearby well logs and “field observations.” The three closest wells, found on the immediately adjacent property, have static water levels ranging from 24 to 29 feet. The discrepancies between the logs and “field observations” are significant and require verification.

RESPONSE: The site is on a bench at an elevation that is 60 feet above the surrounding landscape. The three closest wells are on properties that are located below the bench. It is, therefore, not surprising that the static water levels below the bench are higher relative to ground surface than those on the bench.

3. **COMMENT:** Dust and air quality – The site will include both an asphalt and concrete plant. The risk of serious air pollution is obviously very real. The air quality is very poor in the area and will be bad for the residences. The air quality seems to just hang in the area. When I was chopping hay, there would be a cloud of dust, hanging for an hour or so. This is not good for people, who cannot breathe, if there is dust.

RESPONSE: Air quality standards are based upon the Clean Air Act of Montana and pursuant rules and are administered by the DEQ Air Resources Management Bureau (ARMB). DEQ has an Environmental Protection Agency (EPA) approved air quality program. Air quality permits and permit conditions are established to promote compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health and the environment.

ARMB requires permits for asphalt and concrete plants that have a potential to emit more than 15 tons per year (TPY) of any airborne pollutant, other than lead (Montana Rules - ARM 17.8.743(1)(b)). The lead permitting threshold is 5 TPY for new sources and 0.6 TPY for modified sources (ARM 17.8.743(1)(a)). Other sources such as generators and crushers may also require air quality permits.

Generally, ARMB establishes permit limitations on facility production and/or hours of operation of the equipment to minimize emissions. The use of such limitations to regulate the criteria pollutants (total particulate matter (PM), particulate matter with an aerodynamic diameter of 10 microns or less (PM10), oxides of nitrogen (NOx), volatile organic compounds (VOC), carbon monoxide (CO), and oxides of sulfur (SOx)) also minimizes the amount of hazardous air pollutant (HAP) emissions. The facility may also use pollution controls that could further reduce emissions, and pollution control equipment may be specified as an operational requirement in the permit.

Montana's standards for acceptable emissions are health-based standards and comply with federal guidelines. Asphalt plants that are permitted by the state are permitted in the manner described above and typically generate relatively small amounts of HAP's in relation to the corresponding major source threshold. The major source threshold for HAP's in the Federal Clean Air Act, section 112(a)(1), is defined as 10 tons per year or more of any HAP's or 25 tons per year or more of any combination of HAP's.

Fugitive dust is considered to be a nuisance but is not considered to be harmful to health. It is regulated at mine sites by gauging opacity - measuring visibility through the dust plume. Dust suppression on a crusher is accomplished by spraying water into the crushing chamber and onto the conveyor belt that transports the crushed material onto stockpiles. Fugitive dust from the site in general would also be controlled by spraying water on the pit floor and on the roads. Occasionally an operator will use a surfactant such as magnesium chloride to provide extra control on heavily used areas such as a main access road. Richards has proposed the use of water only to control fugitive dust on the site, including on the crusher.

4. COMMENT: Endangered fisheries – The gravel pit is immediately adjacent to Blanchard Creek and immediately upstream from the Clearwater River. Blanchard Creek is listed as #7 of the 108 most valuable tributaries of the Blackfoot River according to Fish Wildlife and Parks' "Basin-wide Restoration Plan." It is in the heart of the Blackfoot River watershed, a nationally acclaimed valley that has had restoration and preservation investments of at least \$48 million over the last 30 years. Blanchard Creek is a critical spawning tributary for rainbow trout, and an important migration corridor for Westslope cutthroat trout. It also has the unique distinction of being the only tributary in the middle section of the Big Blackfoot River to have nonlethal levels of whirling disease.

RESPONSE: The site would be graded to drain inward, away from the creek so that there would be no direct discharge to any of these surface waters from this proposed operation. Richards has installed a source-water well near his proposed concrete plant and a monitoring well near the southern tip of the site. The floor of the pit would remain at least 10 feet above the high water table as observed in these on-site wells. Fuel stored in tanks on-site would either be EPA approved Convalts, a steel tank inside a concrete vault, or single-walled tanks that would be located in plastic-lined earthen bermed containment areas capable of holding twice the volume of the tank. This would minimize the risk of contamination to the groundwater beneath the site. The withdrawal of 35 gallons per minute (gpm) or less of groundwater from each of the two existing on-site wells should not have an impact on the volume of groundwater flowing beneath the site that might feed into either Blanchard Creek or the Clearwater River.

Richards has no detailed Ground Water Monitoring Plan at this time. He would analyze a sample from the source well for baseline data as soon as it begins operation and would sample and analyze a water sample for drinking water parameters and hydrocarbons every six months while the asphalt plant is operating. He would keep logs of sampling activities and send copies of these and resulting laboratory analytical reports to DEQ.

DEQ proposes a more detailed Ground Water Monitoring Plan in its “Agency Preferred Alternatives” (see Section 22 and ATTACHMENT 2).

Richards does not intend to take water from either the Clearwater River or Blanchard Creek for use at the proposed Richards Pit #2 at this time.

5. COMMENT: Gravel pit depth – The application claims the pit will be 40 feet deep for the removal of 1.5 million cubic yards of gravel from the proposed 22-acre site. A portion of the 22 acres must be left alone to allow for boundaries, slopes, etc. Assuming 18 acres becomes the effective mining area, it would require a pit 51.6 feet deep if 100 percent of the material is usable material. If a more likely amount of 80 percent is usable material, then the pit would need to be about 60 feet deep. At this depth, the pit could easily penetrate the water table.

RESPONSE: The applicant is aware that 1.5 million cubic yards is more than can be obtained from the site with a 40 foot pit. However, Richards is proposing to only go 40 feet deep with side slopes at 3:1 at this point in time. Since he intends to use this site for industrial purposes after mining, he does not want to mine into the water table and have to deal with a pond. The stated 1.5 million cubic yards allows for future revisions to perhaps remove the outer slopes that would buffer the site visually from US Highway 200 and Blanchard Creek Road. Richards would need to submit a proposed permit revision to mine deeper than 40 feet or to remove any of the side slopes.

6. COMMENT: Traffic safety and highway impacts – This operation will introduce a major public traffic safety hazard in an already dangerous portion of Montana Highway 200.

RESPONSE: There would be an increase of gravel, concrete and asphalt trucks entering and leaving that stretch of US Highway 200 during the operation of Richards Pit #2. The amount of traffic increase would depend on the number of projects requiring products at any given time. Richards does not anticipate more than 10 trucks per day or 25 trucks per week based on the traffic generated at his Seeley Lake operation. Trucks would be using the existing drive approach to the property off of Blanchard Creek Road. The presence of slow moving gravel trucks may cause traffic to back up at times on both US Highway 200 and MT Highway 83 until an opportunity for passing becomes available or the trucks pull off to the side of the road to let traffic pass.

7. COMMENT: Water rights and use – Mr. Richards must obtain a change of use for his water rights. These rights are currently irrigation and domestic use rights. Conversion to industrial use for a gravel/cement/asphalt operation will almost certainly result in degraded water quality.

RESPONSE: Mr. Richards has the right to contact the Department of Natural Resources and Conservation (DNRC) and request conversion of his water rights. Richards has the right to a total of 1.18 cubic feet per second (cfs) from the Clearwater River. A diversion structure in Blanchard Creek could divert up to 47 cfs, but Blanchard Creek only flows reliably in the spring. However, Richards does not intend to use water from either the Clearwater River or Blanchard Creek for use at the proposed Richards Pit #2 at this time.

Richards intends to slowly fill two 500,000 gallon ponds as well as a 10,000 gallon tank to provide the necessary water for operations, and to continue pumping water into these facilities as needed to replace water lost in materials removed from the site, through evaporation, used in dust control, or infiltration into the ground. One or more wells pumping 35 gpm or less may be drilled to accomplish this. While no water rights have to be obtained for wells of this size, Richards must inform DNRC of the wells. If the wells are connected together via a manifold, then the pumping rates are combined. Should the combined rates exceed 35 gpm, then Richards would have to apply for rights to this groundwater.

8. COMMENT: Wildlife habitat – A number of public and private agencies (Fish, Wildlife, and Parks, Missoula County Office of Programs and Grants, Missoula County Rural Initiatives, Trout Unlimited, the Nature Conservancy, the Elk Foundation, Montana Wildlife Federation, etc.) have recently determined this land is key wildlife habitat and travel corridors for key species including elk, grizzly bear, cougar, and all their supporting prey species. The proposed adjacent subdivision was considered intolerably intrusive. This pit, sitting on the same terrain, has a great chance of doing the same. The potential danger to wildlife should require the more detailed review provided by an EIS.

RESPONSE: Information obtained by DEQ from the Montana Natural Heritage Program does not indicate that this area supports grizzly bears, and this open land is not typical bear habitat. However, according to the Department of Fish, Wildlife, and Parks (FWP), a collared grizzly bear was documented in the vicinity of the proposed pit in 2005 (FWP 2007). FWP has had numerous reports of grizzlies in and around the Blackfoot-Clearwater Wildlife Management Area, Blanchard Flats, Blanchard Creek, Lost Horse Creek, Lost Prairie Creek, Bear Creek, Blacktail Mountain and

Ninemile Prairie. There have also been numerous confrontations with black bears in the Clearwater Junction area. The key elk winter range, the Blackfoot-Clearwater Wildlife Management Area (WMA), which has been in existence since 1948, is approximately ¼ mile northeast of the proposed site towards Salmon Lake. According to FWP (2007), more wildlife are seasonally concentrated in the area within a 6-mile radius of Richard's previously proposed subdivision than within any other similarly sized area in Missoula County or the Blackfoot Watershed. The proposed mine site lies just east of the previously proposed subdivision. The near proximity of 1,400 elk, 1,000 mule deer, and 800 white-tailed deer to the north on the Blackfoot-Clearwater WMA--and another 500 elk and untold numbers of white-tailed deer to the south near the Paws Up and E-Bar-L Ranches--ensure that wildlife encounters would be routine on the land proposed for any type of development. This means that the proposed Richards Pit #2 does lie within identified elk winter range. That same area is available for use by cougars and other wildlife species.

The proposed mine site lies between an old reclaimed pit to the west of Blanchard Creek Road and an existing Montana Department of Transportation (MDT) pit adjacent to the east. There are other undisturbed access routes to the Clearwater River, but wildlife would still have to cross US Highway 200 to reach it. Unlike the previously proposed subdivision, there would not be any mining-related activities in the vicinity of Blanchard Creek other than traffic on the road. Wildlife would have cover for travel in the drainage. There would be minimal fencing to restrict wildlife movement and no domesticated dogs to harass wildlife. Increased truck traffic on Blanchard Creek Road could increase the potential for vehicle-wildlife accidents between the highway and the entrance to the mine as wildlife use the drainage for travel. The same may be true along U.S. Highway 200 and MT Hwy 83 as trucks come and go from the mine. Careful and defensive driving by truck drivers would be the best means to reduce vehicle-wildlife contact. Under the Agency Mitigated Alternative, all garbage cans at the site would be bear-proofed to reduce the potential for bear encounters at the site.



IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are fragile, compactible or unstable soils present? Are there unusual geologic features? Are there special reclamation considerations?	<p>The proposed gravel pit is located at the south end of a fault-blocked river valley between two major mountain ranges, the Mission Mountains to the west and the Swan Mountains to the east. The deposit is composed of stratified layers of sand and gravel overlain by a layer of sandy loam topsoil left from retreating continental glaciers around 10,000 years ago and re-worked by the Clearwater River. A branch of the glacier that extended from Flathead Lake to Clearwater Junction scoured out a chain of lakes, including Seeley and Swan Lakes that dot the length of the Swan River Valley. Tertiary sediment fills the bottom of the valley and the more recent Quaternary glacial debris forms a layer on the surface. The site is located on a bench that sits 60 feet above the confluence of Blanchard Creek and the Clearwater River, which flows out of the southern end of the Swan Valley through Seeley and Salmon Lakes to the Blackfoot River.</p> <p>The primary soil at the site is classified as Perma gravelly loam according to the Montana SSURGO Soils (NRIS 2007). The description for this soil series indicates a combined thickness for the A horizons of 7 to 15 inches. The field survey at the site indicates an</p>

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	<p>average of 6 inches of topsoil which most likely corresponds to the A1 horizon or the combined A1 and A2 horizons. The topsoil is typically a dark grayish brown gravelly loam with 20 to 30 percent pebbles. The B horizon (or subsoil) may extend to a depth of 3 feet and consists of brown or pale brown very gravelly loam or sandy loam with up to 40 percent pebbles.</p> <p>The soil would be salvaged in advance of mining and stockpiled along the perimeter of the permit boundary. The resulting berms would average 10 to 20 feet high and 30 to 40 feet wide with 1.5:1 slopes. All berms and soil stockpiles would be seeded with the hard fescue seed mix at the DEQ-suggested seeding rate or with another approved suitable pasture seed mix. Broadcast seeding rates would be double drill seeding rates.</p> <p>The topsoil in the temporary berms would be used during reclamation. A minimum of 6 inches of soil would be replaced over the regraded outer highwalls. Since the floor of the pit would not be re-soiled due to the nature of the post-mining land use, more soil could be placed on the highwall slopes. The rocky nature of the soil should help to keep the soil from eroding prior to vegetation establishment. Soil microbes should re-colonize the soils following replacement.</p> <p>The highwall slopes would be reclaimed to 3:1, re-soiled and seeded with hard fescue. The base of the pit would be graded out smooth with a gravel floor and drained into an interior storm retention pond. There may be a few small areas that would not be needed for industrial or commercial purposes and that would be re-soiled and seeded.</p> <p>Richards proposes to remove 1,500,000 cubic yards of sand and gravel to a depth of 40 feet from the property over approximately 25 years. Some of this material would leave the site in concrete or asphalt mixes. This would be an irreversible removal of material from this site. One and one-half million cubic yards are more than could be removed from this site with a depth of 40 feet and with the slopes on all sides of the permit reclaimed at 3:1. Therefore, Richards would need to submit a proposed permit revision to mine deeper than 40 feet and/or to horizontally expand the operation.</p> <p>There are no fragile, compactable, or unstable soils present, unusual geologic features, or special reclamation considerations.</p> <p>Cumulative: MDT has a gravel pit and asphalt mixing operation adjacent to and east of the proposed site. This operation has been permitted since January 1982. This MDT site is highly visible from US Highway 200. A reclaimed gravel pit formerly owned by Walter Vannoy and operated by American Asphalt in March 1989 is located just west of the proposed site at the intersection of Blanchard Creek Road and US Highway 200. This reclaimed site is somewhat visible from the highway as the outer portion of the bench that was mined was left as a screen, but it is visible from Blanchard Creek Road. Another</p>

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	<p>reclaimed gravel pit owned by Walter Vannoy is located 2,000 feet south of this proposed site across Hwy. 200, and was operated in April 1994 by Gilman Excavating. That pit was a major source of gravel and asphalt for Highway 200 reconstruction, was located between the highway and the Clearwater River, and was highly visible from the highway and residences in the area. Richard's Pit #2 would remove material from the same formation as these three operations and contribute to the cumulative and permanent removal of sand and gravel in this vicinity.</p> <p>The growing number of homes in the Seeley Lake-Swan Lake Valley area, as well as new commercial and industrial structures that might be built in the communities along US Highway 200 and MT Highway 83. These structures and associated facilities will continue demand for sand and gravel in the general area.</p>
<p>2. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?</p>	<p>The site is located on a bench that sits 60 feet above the confluence of Blanchard Creek and the Clearwater River. Blanchard Creek flows to the southeast adjacent to the property and beneath US Highway 200 to the Clearwater River, which flows south to the Blackfoot River. It goes beneath US Highway 200 about ¼ mile from the east edge of the proposed site and then roughly parallels the south side of the highway until Blanchard Creek flows into it.</p> <p>Richards has rights to water for irrigation purposes from the Clearwater River and Blanchard Creek. A pump station is located adjacent to the Clearwater River for pumping river water at a rate of 1.18 cubic feet per second (cfs) to sprinkler irrigate 55.8 acres. Also, a diversion structure exists in Blanchard Creek to divert up to 47 cfs for flood irrigation on approximately 137 acres.</p> <p>Richards does not intend to take water from either the Clearwater River or Blanchard Creek for use at the proposed Richards Pit #2 at this time. Richards would need to apply to DNRC to change the water rights for these sources from irrigation to industrial in order for them to be used for mining purposes. There is a public comment period during this process.</p> <p>Additionally, there is an irrigation line that bisects the proposed mine site from the northwest corner to the southeast corner. Richards intends to use this line to irrigate property outside the permit area. This irrigation line uses water obtained from the Clearwater River. The line would be relocated using temporary pipes as needed to allow irrigation to continue as mining moved through the site.</p> <p>The estimated high water table is 50 feet below the ground surface of the proposed mine site and the low water table is estimated to be 60 feet below the ground surface. Since mining would only be 40 feet below surface it should not intercept ground water.</p> <p>Water for all operations would be obtained on-site. A source water well and a monitoring well, which may also function as a source well,</p>

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	<p>have been installed on the south end of the site to supply some of the water for daily needs. Richards does not anticipate obtaining more than 35 gpm from either well even though total water usage may be as great as 1,000 gpm for certain periods of time at full operation. Water would also be obtained from the two wash plant settling ponds, which would hold approximately 500,000 gallons of water each. These ponds would be gradually filled with water from the wells, and water from the wash plants would be recycled into these unlined ponds as well. Pumping both existing wells at 35 gpm would provide a maximum of 100,800 gallons of water per day to use in filling the ponds. Additionally, there would be a 10,000-gallon water storage tank that would be gradually filled for use in the concrete plant and other uses.</p> <p>As long as the wells did not produce more than 35 gpm, no water rights from DNRC are needed, although Richards must inform DNRC about any additional wells. Any wells that are hooked together via a manifold must have their flow rates combined. If that combined rate exceeds 35 gpm, then a water right must be obtained. If there is no physical manifold, then the rates are not combined, and no water right is required.</p> <p>All surface water from within the permit area would be routed to the wash plant or other settling ponds as needed. No surface water would be discharged off site.</p> <p>The two wash plant settling ponds would occasionally supply water for dust control and other uses as needed. Dust control is estimated to require about 2,500 gallons per day for 300 days per year or about 2 to 3 acre-feet per year. Dust control would include watering roads and the pit floor, spray bars on the crusher, and/or chemical dust suppressant.</p> <p>Water consumption for products should not exceed 35 gallons per cubic yard of concrete delivered off site and 18 gallons per ton of sand or gravel. Product water consumption is estimated to be less than 10 acre-feet per year (3.26 million gallons per year) per well and there would be two wells.</p> <p>EPA-approved Convaults, a double-walled unit consisting of a steel tank inside a concrete vault, or a single-walled non-mobile fuel storage tank, would be used to store diesel and gasoline onsite. Stationary single-walled fuel tanks up to 10,000 gallons would be placed in plastic-lined earthen bermed containment areas to prevent spills from leaking into the ground and reaching ground water. Each containment area would be able to hold at least twice the volume of the tank.</p> <p>Richards maintains some containment and cleanup equipment at his facilities in Seeley Lake, which would be available in case of a fuel spill at this site.</p> <p>The source supply well would be sampled for baseline water quality as soon as it was in operation. When the asphalt plant was in operation,</p>

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	<p>the well would be sampled every six months and analyzed for drinking water parameters and hydrocarbons. A log would be kept of all sampling and results would be sent to DEQ upon receipt from the lab. DEQ proposes more detailed ground water monitoring in its “Agency Preferred Alternatives” (see Section 22 and ATTACHMENT 2).</p> <p>The depth to ground water and the limited withdrawal of ground water from on-site wells would limit impacts to groundwater. Should Richards convert his irrigation rights to industrial rights, the withdrawal of water from the Clearwater River would be relatively small compared to the flow of water in the river and should have no impact on the river, its aquatic biota, or other beneficial users. Since Blanchard Creek typically goes dry during the summer, this source would likely be used during spring runoff when use of this water right would have minimal impact on overall stream flow.</p> <p>Cumulative: There are residential wells in the general area as well as other irrigation water rights in the Clearwater River. The additional use of water by this proposed gravel pit should not place an undo burden on water resources in the area. Since all fuel would be properly contained, mining would not be done below the groundwater table, and DEQ is proposing an alternative for a more detailed groundwatering monitoring plan (see Section 22 and Attachment 2 below), cumulative impacts to groundwater that would affect residential wells or springs in the area are not expected to occur.</p>
<p>3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?</p>	<p>No designated Class I airshed exists in the site area.</p> <p>Fugitive dust would blow off the pit floor, stockpiles, and gravel road within the permit area and would be regulated by the Air Resources Management Bureau (ARMB). It is considered to be a nuisance but not considered to be harmful to health. It is regulated at mine sites by gauging opacity - measuring visibility through the dust plume.</p> <p>Fugitive dust is controlled by spraying roads and pit floors with water or chemical surfactants such as magnesium chloride on heavy traffic areas. This would be done with an on-site water truck using water and/or chemical surfactant as required.</p> <p>Air quality permits would be required on the processing equipment before installment. Machinery, such as generators, crushers and asphalt and concrete plants, are individually permitted for allowable emissions. Best Available Control Technology (BACT) is the usual standard applied to keep each facility in compliance with its individual permit. The crusher would be equipped with water spray bars that would use about 5 to 10 gal/min, while the asphalt plant would be equipped with bag houses or other pollution control equipment. All air quality laws, rules and regulations would have to be followed.</p> <p>The hot mix (asphalt) plant would generally be operated seasonally between April and October. The steam (water) part of the plume from</p>

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	the asphalt plants is not regulated because it dissipates rapidly due to the seasonally warm temperatures.
4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be permanently altered? Are any rare plants or cover types present? Weed control plan?	<p>The proposed site is currently an improved pasture planted with smooth brome and wheat grasses. It has most likely been used as pasture and hayland in the past. Spotted knapweed is present on all surrounding lands but is scarce on the site itself. The knapweed populations on the adjoining private lands, highway rights-of-way, and around the MDT gravel site are thick and heavy. According to the Missoula County Weed District, Richards has submitted a weed control plan that is in compliance with weed district requirements (2006).</p> <p>Records at the Montana Natural Heritage Program indicate that two plant species of concern have been identified in the vicinity of the proposed project (2007). Five plants of Howell's Gum-weed, a US Forest Service and Bureau of Land Management sensitive plant species, were found in 1976 near the Clearwater River and US Highway 200 but that population could not be found 10 years later. Deer Indian Paintbrush, a state species of concern, had been found in areas east of Blanchard Creek. Neither of these two species has been found within the proposed site. Therefore, it is unlikely that operations at this site would have any impact on these species.</p>
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?	<p>Although the application did not identify any known wildlife using the site, the proximity to adjacent wooded areas and Blanchard Creek and the presence of deer tracks at the site seen during a site visit are good indicators that deer do at least travel through the site. A managed elk winter range, the Blackfoot-Clearwater Wildlife Management Area (WMA), is located ¼ mile northeast toward Salmon Lake; the proposed site is considered to be part of the extended and adjacent elk winter range. Other wildlife such as ground squirrels, mice, a variety of birds, foxes, cougars and coyotes may also make use of the site. There have also been numerous confrontations with black bears in the Clearwater Junction area (FWP 2007). Under the Agency Mitigated Alternative, all garbage cans at the site would be bear-proofed to reduce the potential for bear encounters. Also, to the extent that all road kills in the vicinity of the mine were reported immediately, scavenging would be reduced.</p> <p>The mining operation would tend to discourage use of the land by deer, elk and carnivores such as foxes and coyotes during operating hours because of the generation of noise and dust, and equipment operation. There is undisturbed land north of the proposed site available for wildlife to pass around the site. There would not be any mining-related activities in the vicinity of Blanchard Creek other than traffic on the road. Wildlife would have cover for travel in the drainage. There would be minimal fencing to restrict wildlife movement. Increased truck traffic on Blanchard Creek Road could increase the potential for vehicle-wildlife accidents between the highway and the entrance to the mine as wildlife use the drainage for travel. The same may be true along U.S. Highway 200 and MT Hwy 83 as trucks come and go from the mine. Careful and defensive driving by truck drivers would be the</p>

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
	best means to reduce vehicle-wildlife contact.
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?	<p>According to FWP, a collared grizzly bear was documented in the vicinity of the proposed pit in 2005 (FWP 2007). FWP has had numerous reports of grizzlies in and around the Blackfoot-Clearwater Wildlife Management Area, Blanchard Flats, Blanchard Creek, Lost Horse Creek, Lost Prairie Creek, Bear Creek, Blacktail Mountain and Ninemile Prairie. The use of this area is primarily for travel. The greatest risk would be from increased truck traffic on the roads and the potential for road kill. Grizzly bears are also attracted to road-killed deer and elk for scavenging. Careful and defensive driving by truck drivers, immediate reporting of all road-killed animals in the vicinity of the mine, and the use of bear-proof garbage containers at the mine site could help to reduce impacts to grizzly bears from activities related to mining at this location.</p> <p>The Montana Natural Heritage Program has identified several animal species of concern that either have been seen or have habitat in the vicinity of the proposed site (2007). Suitable habitat for an endangered species, the gray wolf, and general locations of known packs have been identified in the Seeley Lake-Swan Valley area to the north. It is possible that an individual may migrate through, but it is unlikely that this proposed operation would have any impact on this species given the distance to suitable habitat from the site and the lack of suitable habitat farther south. The entire area along the Clearwater River, Blanchard Creek, Blackfoot River and the Swan Valley contains habitat appropriate for the Canada lynx, which is listed as threatened. However, given the vast amount of habitat and the proximity of this site to the highway and an adjacent gravel pit, the risk of impacting Canada lynx is extremely small to none. The greatest risk would be from increased truck traffic on the roads and the potential for road kill.</p> <p>Bull trout, a threatened species, has been found in the Clearwater and Blackfoot Rivers. Westslope cutthroat trout, a sensitive species of concern, has been identified in Blanchard Creek, in the lower stretch of Clearwater River between Blanchard Creek and the Blackfoot River, and in the Blackfoot River. There would be no direct impacts to these fish species from the proposed operation as the pit would not intercept the water table nor discharge water into any of these surface waters. EPA-approved Convaults, a double-walled unit, or single-walled non-mobile fuel storage tank, would be used to store diesel and gasoline. Any single-walled fuel tanks would be stored inside a plastic lined earthen bermed containment area capable of retaining twice the volume of the tank. This would prevent contamination of ground water from leaking tanks.</p>
7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?	<p>According to the Confederated Salish and Kootenai Tribes of the Flathead Nation (2007), the project area near the Clearwater Junction was an area of significant prehistoric and historic use by Salish, Pend d'Oreille and Kootenai tribal members. Campsites, hunting and fishing sites, and a burial site are recorded in the local vicinity. A field visit to the site with Mike Durglo, Sr., an elder with the Confederated Salish</p>

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
	<p>and Kootenai tribes, on August 30, 2007, verified that the burial site was not within the proposed gravel pit operation or within lands owned by Mr. John Richards. Therefore, operations at the Richards Pit would not affect the burial site.</p> <p>There is no clear evidence of any other cultural sites on the surface of the proposed site and the ground has been cultivated and planted to improved grass species. Care would need to be taken during all operational phases not to disturb any cultural sites that are identified and to immediately report any that are found to the State Historic Preservation Office and the tribes.</p> <p>The tribal archeologist has requested a walk through of the site prior to site disturbance to help identify any potential subsurface sites by items that may have been brought to the surface by plowing (Schwab 2007).</p>
<p>8. AESTHETICS: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?</p>	<p>The proposed site is located on a bench that sits 60 feet above US Highway 200, which would provide the greatest source of potential viewers. Some equipment could possibly be visible to drivers on the highway as they approached the site during initial operations. As the line of sight steepened, the view of equipment would gradually disappear. Once the floor of the pit was at least 10 feet or more deep, it would be unlikely that anyone traveling on the highway would be aware that there was a sand and gravel operation up on the bench. Only the presence of dust clouds above the bench would tell people that there was an operation up on the bench. As long as Richards controlled fugitive dust by spraying water on dry areas, using sprayers on equipment, and planting topsoil berms as soon as possible, dust should not be a significant visual problem.</p> <p>The equipment would generate noise, but the walls created as the pit was deepened would muffle the sound. Since most viewers would be traveling in vehicles, it would not be likely that they would be aware of the noise created by the equipment. Travelers on Blanchard Creek Road would be more likely to hear the equipment as they would be traveling at a slower speed and might be likely to have windows open. The only resident adjacent to the proposed operation is the applicant's renter. The use of berms around the site and the depth of the pit would help to muffle the sounds of the equipment.</p> <p>Lights would be used as Richards intends to be able to operate this site on a 24-hour basis, 7 days a week if needed for large projects. Typical operations would be during daylight hours. At night, travelers on US Highway 200 might be able to see a glow above the bench. The intensity of the glow would depend on how many lights were in operation and the type and intensity of the lights themselves. This impact could be reduced by using shielded, downward lighting and restricting it to the facilities areas in use at night rather than lighting up the site as a whole.</p>
<p>9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:</p>	<p>MDT has a gravel site that is adjacent to the proposed operation. This proposed operation would increase the number of gravel trucks entering and leaving the highway along this stretch of US Highway 200 from Blanchard Creek Road. MDT has received an application from</p>

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project?	<p>Richards for access to US Highway 200 through the MDT site at some future date, but that option is not part of this application. It is recommended that Richards place signs on US Highway 200 about slow trucks entering to warn east bound traffic that they may need to slow down and similar signage to warn west bound traffic about trucks crossing the highway and turning east. Any signage would need to be approved by MDT.</p> <p>The presence of slow moving gravel trucks may cause traffic to back up at times on both US Highway 200 and MT Highway 83 until an opportunity for passing becomes available or the trucks pull off to the side of the road to let traffic pass.</p>
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other studies, plans or projects on this tract?	<p>No other studies exist for this site.</p> <p>An EA was not done for the MDT gravel pit adjacent to the east that was originally issued to Schellinger Construction in 1982 and later assigned to the MDT in 1985. A checklist EA was done for recent repaving of US Highway 200 (MDT 2004).</p>

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	<p>There would be an increase of gravel, concrete and asphalt trucks entering and leaving that stretch of US Highway 200 during the operation of Richards Pit #2. The amount of traffic increase would depend on the number of projects requiring products at any given time. Trucks would be using the existing drive approach to the property off of Blanchard Creek Road. A maximum of 10 trucks per day and not more than 25 per week is anticipated based on use at Richards Seeley Lake operation. It is recommended that Richards place signs on US Highway 200 about slow trucks entering to warn east bound traffic that they may need to slow down and similar signage to warn west bound traffic about trucks crossing the highway and turning east. Any signage would need to be approved by MDT.</p> <p>Montana Highway 83 is very winding and slow in the vicinity of Salmon Lake and other areas. The presence of slow moving gravel trucks may cause traffic to back up at times in these areas until an opportunity for passing becomes available or the trucks pull off to the side of the road to let traffic pass. The same is true for portions of US Highway 200, although it is generally wider and has fewer sharp curves.</p>
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these	<p>This property had been an improved pasture or hay field. Mining would alter the characteristics of this property during operation. The post-mining land use would be an industrial or commercial site. Agricultural use of this land would be permanently lost.</p> <p>Cumulative: Since there is another operating gravel pit as well as one reclaimed gravel pit adjacent to the site, this proposed operation would</p>

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
activities?	add to sand and gravel operations in this area.
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	Additional jobs may be created, but some workers would shift from the Richards Seeley Lake location to this site. Operations at this site would allow jobs to continue for a longer period of time than if this site were not developed as the Seeley Lake site has a more seasonal use.
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	Additional local and state taxes and revenues would be generated from the sale of sand, gravel, concrete, and asphalt from this proposed mining operation over its proposed 25-year mine life. This would provide more revenue than was generated from the sale of hay bales or property taxes on agricultural land. Property tax revenues would increase again when the land was converted to industrial and commercial uses after reclamation.
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc) be needed?	No additional government services would be required. This operation would fall within the Greenough-Potomac Fire District.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	The land being proposed for mining is unzoned. Zoning compliance has been obtained from the Missoula County Planning Department (2006).
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	<p>US Highway 200 is a scenic highway that follows along the Blackfoot River and provides access between Great Falls and Missoula. Many travelers also turn north at Clearwater Junction onto Montana Highway 83 to travel north through Seeley Lake and the Swan Valley on their way to the Flathead Lake area or Glacier National Park. There are numerous recreational opportunities along both highways, including fishing access points to rivers and lakes, campgrounds, trailheads and others. Montana Highway 83 is very winding and slow in the vicinity of Salmon Lake and other areas and the presence of slow moving gravel trucks may cause traffic to back up at times in these areas until an opportunity for passing becomes available or the trucks pull off to the side of the road to let traffic pass. The same may be true for portions of US Highway 200, although it is generally wider and has fewer sharp curves.</p> <p>There is no recreation potential within the proposed site, and the operation would have no direct impact on recreational opportunities in the area.</p>
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add	The proposed project would not add to the population nor require housing for employees.

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
to the population and require additional housing?	
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	N/A
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	There are other sand and gravel pits in the area. These operations change the landscape and may be perceived by some individuals as causing a shift in the unique quality of the area.
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	N/A

N/A = Not Applicable

22. Alternatives Considered:

- A. No Action Alternative: Under this alternative the permit for Richard's Pit #2 would be denied. The land would remain as pasture or hay land until other uses of the land were proposed and implemented. Richards would be denied full utilization of this property.
- B. Proposed Action: Under this alternative the permit for Richard's Pit#2 would be approved as described. The operation would include a crusher and wash plant with settling ponds and a concrete plant. Eventually, an asphalt plant would be installed and additional settling ponds would be added as needed. Two wells would be used to provide operational water and one well would also act as a monitoring well. The site would be mined to a depth of 40 feet and a large volume of material, but in fact less than the applicant's proposal of 1.5 million cubic yards, would be excavated and removed from the site.
- C. Agency-Modified Alternative: Richards would be required to implement the following mitigations:
 - A Ground Water Monitoring Plan would be required before any operations could begin under the permit (see ATTACHMENT 2).
 - Use downward directional lights and limit lighting to working areas as necessary for safety.
 - DNRC must be notified of any new wells drilled on-site and their usage rate. Water rights must be obtained for wells to be used at over 35 gpm.
 - All garbage cans at the site would be bear-proofed to reduce the potential for bear encounters.
 - It is recommended that Richards place signs on US Highway 200 about slow trucks entering to warn east bound traffic that they may need to slow down and similar signage to warn west bound traffic about trucks crossing the highway and turning east. Any signage would need to be approved by MDT.

23. Public Involvement, Agencies, Groups or Individuals contacted: Missoula County Planning Department, Missoula County Weed Control Board, Montana State Historic Preservation Office, Montana Natural Heritage Program, Montana Department of Transportation, and the Confederated Salish and Kootenai Tribes of the Flathead Nation.

- 24. Other Governmental Agencies with Jurisdiction, List of Permits Needed:** Missoula County Planning Department (zoning clearance), Missoula County Weed Control Board (weed control plan approval), DEQ Air Resources Management Bureau (air quality permits), Department of Natural Resources and Conservation (possible need for water rights permit).
- 25. Magnitude and Significance of Potential Impacts:** The proposed Richards Pit #2 would have long-term but non-significant impacts from the removal of gravel at the proposed site. The removal of the gravel would be irreversible and irretrievable. Impacts to surface water would be negligible as there would be no surface water discharges and no withdrawals of water from either Blanchard Creek or the Clearwater River for operational water needs. Therefore, there would be no impacts on any fisheries associated with these surface waters. Impacts to groundwater would be minimal, as water would be withdrawn through two wells for operational water needs. Storm water could seep back into the groundwater at the site, but the overburden would filter out any suspended solids in the storm water. All fuels stored on site would be contained with secondary containment to minimize the risk of fuel spills getting into the groundwater. Richards would have air quality permits for the crusher and asphalt plant and appropriate dust suppression equipment on these facilities. Water would be used to control dust within the plant area and on the access road. The berms surrounding the gravel pit would be vegetated, which would control dust off the berms and help to mitigate visual quality. Richards would be retaining the outer walls of the bench to screen the operation from the highway. Operating equipment would only be visible during initial operations until it reached a depth of 10 to 15 feet below ground surface where equipment could no longer be seen by people in vehicles traveling on US Highway 200. Impacts to wildlife would be irreversible and irretrievable since the pit would be used a commercial site once gravel operations ceased. Given the large expanse of open and undisturbed lands north of the site, the proposed operation is not anticipated to have significant impacts to any wildlife species. Truck traffic would add to the traffic load on US Highway 200 and MT Highway 83, but is not anticipated to be a significant increase as it would partially replace truck traffic from Richards' Seeley Lake Pit. It would, however, place slower moving traffic in a slightly different location. Signs placed on US Highway 200 would help to warn traffic about entering slow trucks.
- 26. Regulatory Impact on Private Property:** The analysis conducted in response to the Private Property Assessment Act indicates no impact. The Department does not plan to deny the application nor restrict the use of private property so as to constitute a taking.

27. References:

- Missoula County Planning Department. 2006. Zoning Compliance Form for Richards Dev. Co. for the Richards Pit #2 signed by Elaine Hawk, Associate Planner on September 12.
- Missoula County Weed Control Board. 2006. Weed Plan Approval Form for Richards Dev. Co. for the Richards Pit #2 signed by William J. Otten on September 14.
- Montana Department of Transportation. 2004. Environmental Checklist for Pavement Preservation Projects. Project No. NH 24-1(58)27, ID: 5451, Project Name: Jct MT 83 – West. November 1.
- Montana Fish, Wildlife and Parks. 2007. Letter from Mack Long, Regional Supervisor, FWP, to Ron Ewart, Eli & Associates, Inc., regarding Clearwater Meadows Ranch, *revised*--Proposed major (59 lots on 202.1 acres) subdivision, Clearwater Junction vicinity. June 20.
- Montana Natural Heritage Program. 2007. Letter to DEQ listing species of special concern within the Richards Pit Project Area. September 21.
- National Resource Conservation Service (NRCS). 2007. Soils survey information for the Richards Pit site area found at <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. July 2.

Natural Resource Information System (NRIS). 2007. SSURGO soil mapping units. Found at <http://maps2.nris.mt.gov/mapper/MapWindow.asp?Profile=2789065&Cmd=Build+Reports&pZoom=ZoomIn&Zfact=1&Click.x=284&Click.y=191&Image=2005> and <http://maps2.nris.mt.gov/mapper/ReportsASP/SSURGO.asp?ProfileID=2789065&LayerID=1815&ReportID=1>. July 30.

NRCS. 2007. Soils survey information for the Richards Pit site area found at <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. October 2.

Pablo, Marcia. 2007. Letter to DEQ regarding Confederated Salish Kootenai Tribes of the Flathead Nations' concerns about the proposed Richards Pit operation. January 8.

Schwab, Dave. 2007. An e-mail to Kathleen Johnson, DEQ, from Dave Schwab, Archeologist, Confederated Salish and Kootenai Tribes of the Flathead Nations regarding a cultural resource walk-over on the site prior to operation start up. September 4.

28. Recommendation for Further Environmental Analysis:

☐ EIS

☐ More Detailed EA

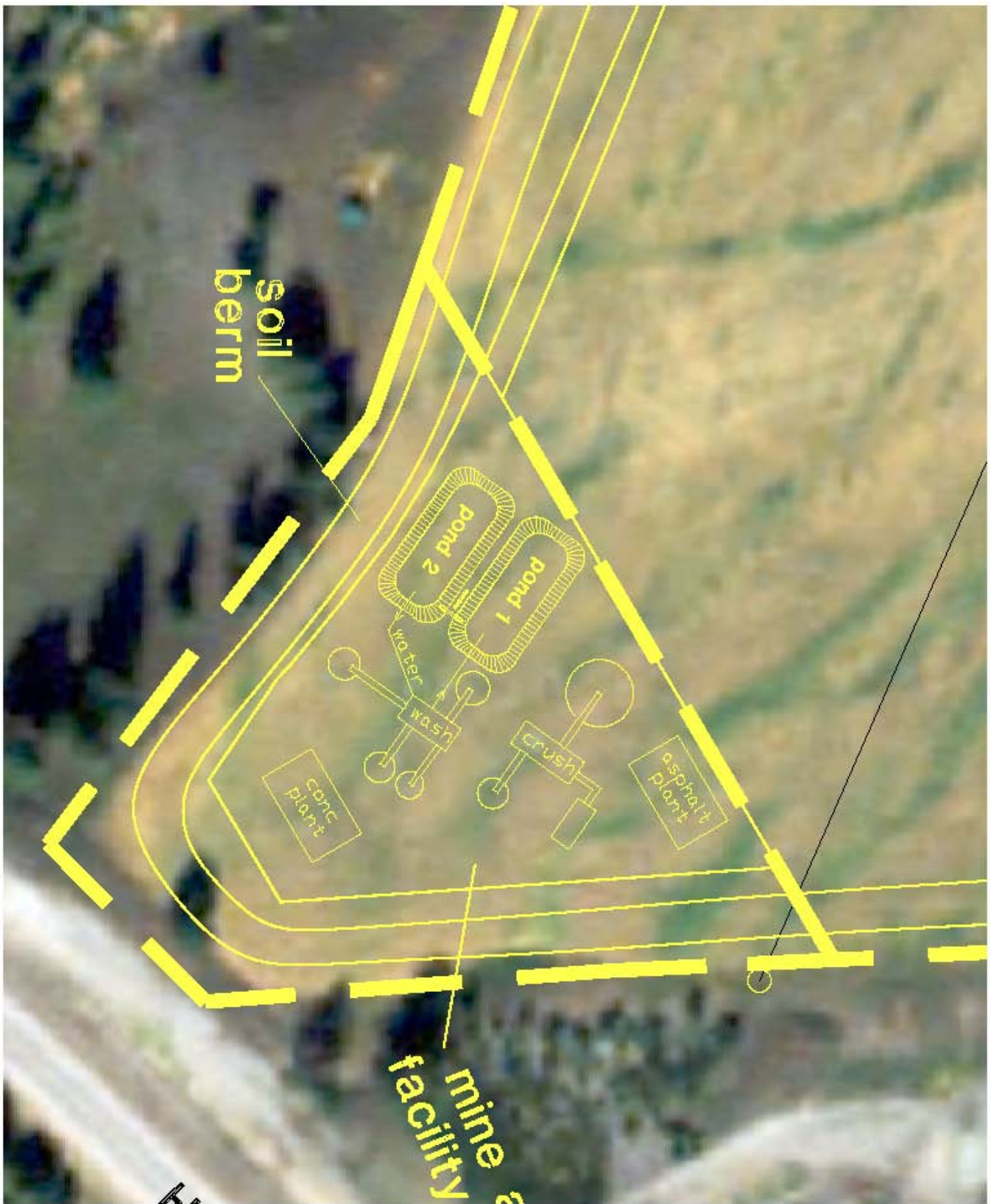
☒ No Further Analysis

29. EA Prepared By:	Kathy Johnson	DEQ MEPA Project Coordinator
	Name	Title
30. EA Reviewed By:	Rod Samdahl	Opencut Mining Program Environmental Specialist
	Name	Title
	Chris Cronin	Opencut Mining Program Supervisor
	Name	Title
<u>Bureau</u>	Neil Harrington	Chief, Industrial and Energy Minerals
	Name	Title

ATTACHMENT 1

PROJECT MAPS





ATTACHMENT 2

Groundwater Monitoring Plan

- The casings of the observation well and source-water well will be surveyed in with true mean sea level elevations recorded for the collars and adjacent ground surface. These elevations can be used to relate static water levels from these two wells to each other and to wells and exposed water in the area.
- Conduct a preliminary chemical baseline sample analysis of the water quality from the observation well. A pre-operation analysis of the water is a good idea for this site since there have been asphalt plants very nearby and there is an existing hot-mix maintenance site directly to the east of the facility site. Samples will be taken by trained professionals using standard operating procedures for legal sample handling including chain-of-custody documentation, and sent to a chemistry lab using their recommended procedures. This test will include the following:

Analytical Parameters and Associated Uses		
Parameter	Analytical Method or Category	Relative Operations
Volatile Organic Compounds	EPH Screen EPA 524.2 (VPH)	Diesel Powered Vehicles & Equipment Gasoline Powered Vehicles & Solvents
Baseline Conditions	Field Parameters	Used to classify groundwater - temperature, pH, conductivity
	Physical Properties	Used to classify groundwater - pH, conductivity, total dissolved solids (measured)
	Inorganics	Used to classify groundwater - total alkalinity as CaCO ₃ , chloride, fluoride, sulfate, sodium absorption ratio, hardness of CaCO ₃ , Anion/Cation balance sigma
	Dissolved Nutrients	Used to classify groundwater - nitrate + nitrite as N and orthophosphate
	Dissolved metals	Used to classify groundwater - calcium, iron, magnesium, manganese, potassium, sodium, copper, cadmium, chromium, lead, zinc
General Indicator Parameters*	EPA Methods	Sensitive to change
*includes total dissolved solids, chloride, and nitrate.		

- Measure and record the static water levels of the two wells on or around the 1st day of each month for a period of one year. This data set will provide detailed information

about the groundwater through a full high and low water annual cycle. If future monitoring is needed, enough will be known about the cyclic nature of the water table to make appropriate decisions. The static water levels must be measured by a trained person at the exact same point on the casing collars to an accuracy of 1/10th of an inch and must be recorded in mean sea level elevations.

- Within 30 days of completion of sampling and receipt of the lab analysis, submit two paper copies of a report to the DEQ Kalispell Office with an electronic copy emailed to rsamdahl@mt.gov that contains the data tabulated, and attach the lab results. Within 30 days of completion of the 12 months of static water measurements, submit two copies of a report to the DEQ Kalispell Office with an electronic copy emailed to rsamdahl@mt.gov that contains the data tabulated and graphed.
- Within 7 days of start up of the asphalt plant, and every three months while it is active, water samples will be collected from the monitoring well and analyzed for the following parameters:

Analytical Parameters for Quarterly groundwater Monitoring		
Analysis	EPA Method	Purpose of test
VPH	MA 1998	Gasoline fuel
EPH	MA 1998	Diesel, oil and lubricants

- Future testing may be required on a case-by-case basis by the DEQ. All such tests would follow the same format as those expressed above.